

## Commonly Used Medical Spinal Terminology

### A Glossary of Terms

- ◆ Medical language is often difficult to understand. This is not because doctors and therapists are being awkward or exclusive but because, as in any specialised field of knowledge, precision of meaning is necessary to avoid misunderstandings and mistakes.
- ◆ The evolution of medicine and medical terms dates back before Hippocrates, commonly regarded as the father of medicine, who died in 399 B.C. Therefore medical language consists of a mixture of Greek, Latin, Arabic and European languages. No wonder it is complicated!
- ◆ Do not be afraid to ask if you don't understand, as understanding your back or neck problem makes it much easier for you to manage it effectively.

#### **Acute**

Of sudden onset, sometimes related to an accident or injury. Usually settles within a few days or weeks.

#### **Acute-on-chronic (Sub-Acute)**

Repeated episodes of back or neck pain continuing for longer than three months.

#### **Ankylosing**

As in Ankylosing Spondylitis, a rheumatic-type condition more common in men, in which some of the soft tissues in the spine are replaced by bone, leading to aching, stiffness, and sometimes a stooping posture.

#### **Annulus fibrosus**

The tough, interwoven, many layered outer casing of the intervertebral disc. Only the outer third is sensitive to pain.

#### **Anterior**

Means the front of ... ..

#### **Arachnoid**

Delicate membrane inside the dura, surrounding the brain and spinal nerves and containing the cerebrospinal fluid.

#### **Arachnoiditis**

Inflammation of the arachnoid. A disease where dense scar tissue forms around usually the lower spinal nerves causing burning pain, pins and needles, numbness and weakness in the legs.

#### **Arthritis**

See Osteoarthritis.

#### **Bilateral**

Both sides.

#### **Bone Scan**

Usually refers to an isotope scan, as safe as an x-ray, used to diagnose tumours, infections, bone graft flaws and some fractures.

#### **Brachial Plexus**

The junction of nerves emerging from the lower levels in the neck to form the three main nerve trunks supplying motor and sensory function to the upper limbs.

#### **Bursitis**

Inflammation of the friction pad between muscle and bone.

#### **Cauda Equina**

Latin for the 'tail of the horse', refers to the leash of small but vital nerves in the lumbar region which run down to the bladder, anal sphincter and genital area providing them with sensation and muscle power. Damage may occur from pressure from a disc prolapse or injury. That pressure needs urgent surgical intervention within a few hours to give a chance of recovery.

#### **Cerebro-spinal fluid (CSF)**

Clear fluid surrounding the brain and spinal nerves. Withdrawn at lumbar puncture for diagnostic testing. Sometimes leaks during spinal surgery and may require a procedure to repair the leak followed by lying down for a few days.

#### **Cervical Spine**

That part of the spine contained in the neck consisting of seven separate vertebrae.

#### **Chronic**

Refers to the duration of pain but not its intensity. Chronic back pain means symptoms present for longer than six weeks to three months.

#### **Claudication**

Limitation of walking distance. (Roman Emperor Claudius had a limp).

#### **Congenital**

Present at birth. Usually refers to a malformation of bone or soft tissue.

#### **Coccyx**

Small articulating bones at the lower end of the sacrum that can be the site of pain (coccydynia) as they have pelvic muscle attachments.

#### **Codeine**

Useful medium-strength painkiller. Present in drugs with Co...in their name, e.g. Coproxamol. Main side effect: constipation.

### **Conservative**

Non-political ! Refers to non-surgical treatment, e.g. physical therapy, pain-killers, exercises, massage, etc.

### **C.T.Scan**

Computerised Tomography is an x-ray technique giving high definition pictures of bone in particular and to a lesser extent soft tissues. Very good for defining spinal fractures and bone destruction by tumours. Requires relatively high x-ray dosage.

### **Decompression**

An operation to relieve nerve compression by removing bone or soft tissue. Effective for spinal stenosis in particular.

### **Dexa-scan**

Ultrasound technique for assessing bone density (osteoporosis) in the heel bone, vertebrae and neck of femur.

### **Disc**

The strong soft tissue connector between two vertebrae, which acts as a hinge and shock absorber to some extent. It consists of a tough, interwoven, fibrous outer casing, the annulus fibrosus, with a softer centre, the nucleus pulposus, which tends to dry out gradually with age.

### **Discectomy**

An operation to remove extruded disc material causing nerve compression.

### **Discogram**

An x-ray technique in which radio-opaque dye is injected into a suspect disc to outline its structure and to see if the injection reproduces the symptoms complained of.

### **Disc Degeneration**

A natural ageing process of gradual dehydration and narrowing of a disc. Visible on MRI scans and can be a source of pain but often is not.

### **Disc Protrusion or Prolapse**

Usually refers to an appearance on MRI scans in which the back of the disc is seen to be bulging or leaking disc material which may press on a nerve to cause Sciatica.

### **Dura**

Thin fibrous outer covering of the brain and spinal nerves containing the arachnoid layer which in turn contains the cerebro-spinal fluid.

### **Enthesitis**

Inflammation of the junction of a muscle often with calcification or fibrosis. See Tennis Elbow.

### **Epidural Injection**

Injection into the space around the spinal nerves usually with local anaesthetic and steroid to reduce nerve or soft tissue swelling.

### **Facet Joints**

A pair of small joints, one on each side, between each vertebra at the back of the spine, which provide mainly rotational stability. They may become arthritic and cause nerve pressure.

### **Fenestration**

Surgical technique for accessing a disc prolapse or spinal nerves through a small aperture. (Latin: fenestra = window).

### **Foramen**

The bony channel between two vertebrae through which the nerve root exits from the spinal canal on each side.

### **Fusion**

Spinal fusion means joining two or more vertebrae together by bone grafting with or without metal or other instrumentation so that they no longer move independently.

### **Herniation**

Used to describe a disc prolapse working its way through the annulus fibrosus.

### **Iliac, Ilium, Iliac**

Upper most of the three bones that make up the hip bone.

### **Intervertebral Disk**

See disc

### **Instability**

Used to describe excessive movement or excessive pain from one vertebra moving on another, e.g. lumbar instability syndrome.

### **Grafting**

The transfer of one tissue onto another with the intention of it continuing to live and perform a useful function. Bone, skin and cornea are examples.

### **Kyphosis**

A convex angulation or curvature of the spine when viewed from the side, as in a widow's stoop. Some degree of thoracic kyphosis is normal. The opposite of lordosis.

### **Lamina**

That part of the back of the vertebra, which with the two pedicles, completes the arch through which the spinal nerves run.

### **Laminectomy**

Refers to the operation in which the whole or part of the lamina is removed to relieve pressure on the underlying nerves or spinal cord.

### **Lateral**

Away from the mid-line. The opposite of medial

### **Ligaments**

Strong, flexible, slightly elastic bands or sheets holding bones in place and stabilising joints. They may be sprained or torn by injury which is painful as they contain many sensory nerve endings. The ilio-lumbar and sacro-iliac ligaments are important sources of low back pain.

### **Lordosis**

A concave curvature or angulation of the spine when viewed from the side. Some degree of lumbar lordosis is normal. The opposite of kyphosis.

### **Lumbar**

That part of the spine between the ribs and the pelvis. There are usually five mobile lumbar vertebrae but congenital variations are well recognised

### **Lumbago**

Pain in the lumbar spine.

### **Medial**

Towards the mid-line. The opposite of lateral.

### **Microdiscectomy**

Surgical removal of a disc prolapse using a microscope

### **MRI Scan**

Magnetic Resonance Imaging technology, allows high resolution pictures of soft tissues as well as bone according to their water content. Very good for imaging nerve compression, tumours, etc. It does not involve x-rays. No known adverse effects.

### **Multi-disciplinary Rehabilitation**

A treatment of chronic back pain involving attendance at a course consisting of a tailored and graduated regimen of exercise, education and understanding, group therapy and coping strategies.

### **Myelogram**

An x-ray technique in which a radio-opaque dye is injected into the cerebro-spinal fluid to outline a disc prolapse or tumour. Largely replaced by MRI and CT scanning.

### **Nerve Root**

At each level in the spine a pair of nerves emerges between the vertebrae on each side. These are the nerve roots that may then combine to form nerve trunks such as the sciatic nerve in the legs or the median nerve in the arms.

### **Non-steroidal Anti-inflammatory Drugs (NSAID)**

Very useful in the treatment of rheumatic conditions, also spinal pain related to strain or injury. Ibuprofen (Nurofen) is available over the counter but stronger versions eg Voltarol on prescription only. Main side effect: gastric irritation and bleeding. Read the accompanying leaflet.

### **Nucleus pulposus**

The soft centre of the intervertebral disc. Jelly-like in the young but gradually dehydrates and shrinks with age.

### **Osteoarthritis**

Wear and tear changes in a joint with age and accelerated by injury. May or may not be painful in its later stages.

### **Osteophytes**

Bony prominences around the margins of joints associated with osteoarthritis. May cause pressure on adjacent structures, e.g. nerves.

### **Osteoporosis**

Thinning of bone structure with calcium loss causing bone weakness and tendency to fracture of vertebrae and hip bone. Commoner in post - menopausal women, smokers, after prolonged steroid use or eating disorders.

### **Pain**

Pain is an emotion experienced in the brain; it is not like touch, taste, sight, smell or hearing. Pain can be perceived as a warning of potential damage, (Nocioceptive pain) but can also be present when no actual harm is being done to the body but nerves have been activated possibly as a result of earlier nerve damage but not always. (neuropathic pain) It is modified by many psychosocial influences such as depression, anxiety, family stresses etc. The disability it causes also varies greatly in different individuals. Back pain in particular is difficult to understand as in general, moderate movement and exercise is good for it rather than rest, unless there is actual nerve compression or irritation. Back or neck pain is divided into: Acute, chronic or acute-on-chronic (sub-acute). See above

### **Paracetamol**

Useful relatively mild painkiller with few side effects at the correct dose. Present in drugs with ...amol in their name. (eg Codamol is codeine and paracetamol)

### **Paraplegia**

A condition of motor and sensory loss below an injury or abnormality of the spinal cord affecting the trunk and/or the lower limbs.

### **Pedicle**

A bony column rising from the back of the body of the vertebra on each side, which forms an arch through which the spinal nerves run. Forms a useful anchorage for pedicle screws in spinal surgery.

### **Pelvis**

The bony funnel-shaped structure formed by the 'hip' bones on each side with the lower part of the vertebral column (sacrum) at the back.

### **Peridural Fibrosis**

Formation of scar tissue around the dura usually after surgery. Usually of little significance.

### **Physical Therapist**

Includes physiotherapists, osteopaths, chiropractors, remedial gymnasts, etc.

### **Posterior**

Means the back of ... ..

### **Quadriplegia**

A condition of motor and sensory loss below an injury or abnormality of the spinal cord in the neck affecting all four limbs.

### **Radicular Pain**

Pain in the arm or leg caused by nerve compression or irritation in the spine.

### **Referred Pain**

Pain or heaviness felt at a location remote from the pain source. The nervous system interprets intense pain as coming from a wide area.

**Sacrum**

The curved triangular bone at the base of the spine, which with the pelvic bones on each side, forms the complete pelvis.

**Scheuermann's**

A condition of adolescence in which mainly the thoracic vertebrae appear to go through an abnormally soft phase and become wedge shaped, producing a degree of roundback, occasionally severe enough to need surgical correction. There is often some aching in the teens but the condition tends to become more or less painless with maturity.

**Scoliosis**

Spinal curvature usually to the right side and commonest in adolescent girls. May need surgical correction. Also used when there is back pain and muscle spasm on one side causing a temporary curvature or there may be a leg length difference causing a permanent curvature.

**Sciatica**

Strictly means pressure or irritation of the sciatic nerve roots in the back due to a disc protrusion or prolapse causing pain into the leg. Often used for any leg pain of spinal origin.

**Slipped Disc**

Common expression for disc protrusion or prolapse pressing on a nerve causing sciatica in one or both legs.

**Sphincter**

A ring of muscle, normally under voluntary control. The anal and bladder sphincters are responsible for continence. This may be compromised by nerve damage in the spine.

**Spinal Cord**

The main nerve trunk as thick as your little finger which runs from the base of the skull down to the second lumbar vertebra inside the spinal canal. Injury results in paralysis and loss of sensation below the level of injury.

**Spinal Stenosis**

Narrowing of the spinal canal and/or nerve outlets resulting in claudication.

**Spondylitis**

Inflammatory disease of a spinal joint(s). Spondylos = vertebra (Greek)

**Spondylosis**

Degenerative or wear-and-tear change in a spinal joint. Often associated with age and of little significance, but may be a source of pain especially combined with an injury.

**Spondylolisthesis**

Forward slip of one vertebra on another.

**Stabilisation**

When used as a surgical term, 'spine stabilisation' means reducing the range of movement of a symptomatic intervertebral joint either temporarily or permanently without fusing it.

**Syndrome**

A collection of symptoms.

**Tennis Elbow**

A condition caused by excessive strain on the junction between muscle, tendon or ligament and bone. A similar condition occurs at many sites in the body including the neck and back. Also known as enthesitis.

**TENS**

Transcutaneous nerve stimulation. A technique in which a small battery-powered box delivers carefully controlled and timed electric stimuli to a painful area resulting in blocking of pain from that area. Obtainable from many physical therapists.

**Thoracic**

Refers to that part of the spine related to the rib cage. There are 12 thoracic vertebrae and which do not move much, but are subject to postural forces so that bad posture in adolescence may result in a 'roundback'.

**Ultrasound scan**

Used to diagnose osteoporosis and some soft tissue injuries. No known side effects.

**Unilateral**

On one side only.

**Vertebra**

An individual spinal bone. The spine consists of seven cervical vertebrae in the neck, twelve thoracic vertebrae at chest level and five lumbar vertebrae in the lower back. Each vertebra consists of a body at the front shaped like a cotton reel, and an arch at the back through which the spinal nerves run topped by the prominent spinous process that you can feel in your back.